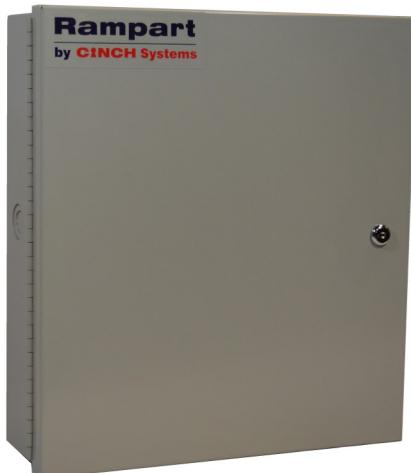




## CeLAN Vehicle Barrier Systems Microprocessor Controls vs. PLC Controls



- Save Labor Cost
- Save Wiring Time
- Reduce Service Time
- Reduce Equipment Cost
- Simplified and Easier System Updates
- Eliminate Custom Programming or Programming Knowledge

## CINCH systems VBS Module Microprocessor Controls vs. PLC Controls

	CINCH VBS Module	PLC Controls	CINCH VBS Advantage
<b>Wiring</b>			
Terminations	Significantly reduced due to design for mission	Complicated, difficult to trouble shoot, more termination's/fail points, requires more parts and space.	The VBS Module system is easy to install. Field installers come in all ranges of skill sets. Clearly labeled, easy to install controller reduces installation errors and time. Save time and money on every installation!
AWG Usage, Configuration	22-18 AWG conductors, point to point or Star	14 AWG conductors, ladder logic, common ground	
<b>Power</b>			
Input	120/240/270/480 100VA	100-240 VAC (using external Eaton ELC PS01)	The VBS Module provides the full range of voltage options from 120 VAC to 480 VAC so you do not have to run special power just for the controller.
Protection	Built-in Circuit Breaker	None	The built-in circuit breaker provides protection for the transformer, controller and operator.
<b>Output Power</b>			
12 VDC	Up to 5 Amps, supervised	None	The VBS Module, along with the Ce-RP provides current limited 12 VDC and 24 VDC power up to a total of 60 Watts combined to support powered safety devices, expansion modules, and other devices.
24 VDC	Up to 2.5 Amps, supervised	1A (using external Power Supply)	
Back-up Power	Built-in supervised battery charger. Up to 18-AH single battery back-up	None	
Protection	Current limited auto-collapsing / restoring	None	
<b>Inputs</b>			
Supervised	Yes - EOL Resistor	No	VBS Module's 5-state zones with end-of-line resistor supervision allows detection of wiring issues including ground faults on the high or low side of zones.
Ground Fault Detection	Yes - High and Low side	No	
Removable Terminals	Yes	No	Clearly labeled removable terminals make wiring the VBS Module simple!
I/O Transient Protection	Yes - 10kV	No	The VBS Module's inputs are tested to pass the high UL standards for I/O transients and surges. Many PLCs do not have any I/O transient protection built in.
LED Input Status Indicators	Yes, dynamic, per input	No	LED input status indicators make it easy to see the state of any input. No need for meter and interpret the input voltage!
Input Glitch Protection	Yes, multiple matching scans required from each input before determining a state change has occurred.	No	Many input devices can have very-short duration 'glitches' that appear to change state for microseconds. VBS Module takes multiple samples across milliseconds of time from each input to filter out sensor glitches.
Input Scan Time Adjustable	128ms-1024ms adjustable	Programming dependent.	The VBS Module allows for response time of an input to be adjusted to better address the needs of the type of sensor device and any field concerns.

	CINCH VBS Module	PLC Controls	CINCH VBS Advantage
<b>Control Outputs</b>			
Built-in relays	7-Form A relays and 1-Form C relay rated at 10A @ 120 VAC,	8-Form A relays rated at 10A @ 250VAC (Crouzet XD26 PLC)	VBS Module provides actual relays, not open collector outputs like those found on PLCs.
Add-on modules relays	2-Form A relays rated at 30A @ 250 VAC	None	
External relays	Depends upon relays used.	Depends upon relays used.	
LED Status indicators	Individual LED output status per output		LED output status indicators make it easy to see state of any output without having to breakout a meter and interpret the output voltage!
Add-on module relays	Yes	N/A	
External Relays	Depends upon relays used.	Depends upon relays used.	
<b>Programming</b>			
On-board display	Yes	Yes	The VBS Module is simple to program using the on-board 2x20 display and the programming buttons. No PLC programmer is required! VBS Module uses non-volatile Flash Memory not battery backed memory that will fail when the battery dies. VBS Module provides a clear menu of fully tested options and settings that can be programmed on the bench or in the field. All settings and changes to settings are stored in Micro SD on-board memory. Installation settings can be password protected. There is also an option to set up cycle tests where installer can set the cycle time number of cycles.
On-board programming	Yes	PLC Programming upload	
Memory protection	Flash Memory	Battery Backed	
Defined options - fully tested	Yes	No	
Field Tech programmable options	Yes	With the correct PLC Programming tool and a trained installation tech...maybe	
On-board event history	Up to 32 GB, up to 260 million events	None	
Exportable history	Yes, Micro-SD	None	
Field upgradeable firmware	Yes, via upgrade program stick	None	As new features and firmware are developed they can simply be added to the existing hardware.

	CINCH VBS Module	PLC Controls	CINCH VBS Advantage
<b>User Interfaces</b>			
20 mm buttons	Open, Close, EFO	Depends upon programming	VBS Module provides all fully supervised, clearly labelled inputs -Open, Close, Stop, Manual/Auto, Fire, Radio, and Card Reader. Many buttons can be lighted via on-board outputs.
5.7" Color Touch Screen	Yes	No	5.7" color touch screen provides a bright, vibrant user interface that is attack resistant-reasonably priced..
<b>Data Bus Expansion Options- Local</b>			
20 mm buttons	Yes, Ce-MBC	None	Cinch Systems provides a large selection of expansion modules to address virtually any opportunity that you may have.
5.7" Touch Screens	Yes	None	
Graphical Interfaces	Yes, Ce-T422	None	
Input Modules	Yes, Ce-MBC, Ce-RCP, Ce-MMS	None	
Fiber Optic option	Yes, both Single and Multimode using Ce-FC-S & Ce-Fc-N modules	None	
TCP/IP Expansion option	Yes, using Ce-TCP Module	None	
<b>Operational Modes</b>			
Stand alone operation	Yes	Yes	Simply using onboard inputs for control functions.
Sally Port application	Yes	Maybe with custom programming	Nobody does Sally Ports or multiple barrier systems better or easier than Cinch Systems. Using Cinch's Rampart panel setting up one or multiple sally port operations is easy.
Multiple vehicle barrier control	Enterprise configurations using Rampart central controller with master and remote sub-controller capability	No	
System data back-bone	RS 485 1/2 duplex AES encrypted. Star or point to point wiring styles	No	
<b>Technical Support</b>			
First Line Response Option	Yes	Maybe	
Factory Training	Yes - no charge at the CINCH Facilities	None	
Field On-Site Training	Yes - nominal fee to cover travel expenses of the trainer and equipment.	None	